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Route To:

Subject: 16 North Thinning Units

To: Kathy Wallace, Silviculturist, Sacramento Ranger District

At your request, this letter provides suggestions for modification in post-harvest treatment of the 16 North units. We examined portions of these units on March 20 and I examined several additional areas on March 21. The 5 units, totaling 497 acres, were harvested within the past 6 months as part of a Stewardship project with the Mescalero Tribe. The Tribe has recently begun follow-up thinning/sanitation of the non-commercial (< 9" dbh) component, but has indicated willingness to modify treatment, as appropriate, from the original contract specifications.

Each unit is predominantly ponderosa pine, with generally minor amounts of Douglas-fir and white pine. Juniper and piñon are common on drier aspects within each unit. Douglas-fir and white pine become more abundant in the upper portions of Unit 3. Elevations range from about 7200 to 7700 feet. Severe ponderosa pine dwarf mistletoe occurs in each of the units. Unit acreages, along with an estimate of the proportion of the area infested (based on my observations) are as follows:

Unit 1, 63 acres, 40% infested
Unit 2, 89 acres, 70% infested
Unit 3, 148 acres, 50% infested
Unit 4, 52 acres, 80% infested
Unit 5, 93 acres, no estimate
Unit 6, 52 acres, 40% infested

Note that the thinning crew has already started work in Unit 5; this unit was only examined briefly since modifications at this time would be impractical.

Stand structures are highly variable within each of the units, but each is basically a two-storied stand with a mature overstory and a young, irregularly-stocked (clumpy) understory. The recent Sale removed about one-half of the basal area within uninfested portions, retaining target basal areas of 60 to 80 ft^2. Within infested areas, probably 80 to 90% of the live overstory trees were removed; note that many overstory trees had died in these areas the past several years. Most understory trees are 30 to 40 years old or younger.

The existing prescription basically calls for thinning understory trees to 20-foot average spacing, retaining lightly-infected (DMR 1-2) trees where needed. Recommended modifications are as follows:

1) **Within infested areas, retain only lightly infected trees ≥ 5" dbh (as needed). Cut all visibly infected trees < 5" dbh.** Use 20-foot spacing, with modification of up to 50% (as per existing specs).

For these purposes, "infested areas" are trees within 30 feet of visible infection.

Douglas-fir and white pine (where present) are preferred leave trees within infested area (as per existing specs).

2) **Within uninfested areas, use 15-foot average spacing,** with modification of up to 50%.

3) **Retain all crop-tree quality white pine, regardless of spacing.**

Recommendation #1 represents a somewhat more aggressive approach to mistletoe than the existing prescription. Many lightly-infected trees ≥ 5" dbh should develop into sawtimber-size and/or become seed-producers. Most infected trees < 5" dbh will not. This basic prescription has been used successfully in many National Forest projects in recent years, albeit generally in areas with less severe infestation. Most infested areas here would be considered "clear-cut strata" at Mescalero; however, such an approach appears infeasible under the NEPA analyses for this project. Since some visibly-infected overstory trees were intentionally retained and many others can be expected to have latent infection, attempting to cut *all* infected understory trees would probably be unwarranted and would represent a significant sacrifice of accumulated growth.

Recommendation #2 would retain about twice as many healthy understory trees as the existing prescription. Because of the irregularly, clumpy stem distribution, use of the SDI concept to determine spacing will often result in wider spacing than desirable. Closer average spacing here will better account for future mortality and damage, and make better use of the site. Twenty-foot spacing is simply too wide for these young trees, which (because of existing densities, competition, etc.) often have very slender crowns. Use of 15-foot average spacing will still remove 75% or more of the existing understory trees in most areas.

Recommendation #3 will help promote the Sacramento Mountain white pine population, which is probably the largest in the Region but is becoming severely- impacted by blister rust at the higher elevations. Very little blister rust was observed in these units; moreover, the disease can be expected to remain at relatively low levels here because of the low elevation and other site factors.

Please contact me if you have any questions about these recommendations or need further assistance. As I indicated, I would be happy to discuss these ideas with Tribal project leaders.

/s/ David A. Conklin
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Zone

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